

13

PATENT  
Atty. Docket No. 1618.003

**DECLARATION FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **ELICITING HCV-SPECIFIC ANTIBODIES**

the specification of which (check one)    is attached hereto   X   was filed on December 1, 2000 as Application Serial No. 09/728,423, and was amended on    (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

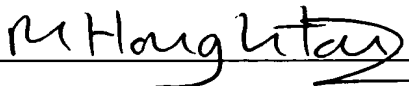
Prior Foreign Application(s)			Priority Claimed	
Number	Country	Day/Month/Year Filed	<u>Yes</u>	<u>No</u>

I hereby claim the benefit under Title 35, United States Code, §120 and/or §119(e) of any United States application(s) and/or provisional applications listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application <u>Serial No.</u>	<u>Filing Date</u>	Status
		<u>Patented, Pending, Abandoned</u>
60/168,234	1 December 1999	Abandoned
60/185,055	25 February 2000	Abandoned

I hereby declare that all statements herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Michael Houghton

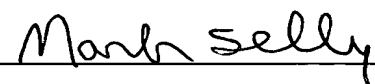
Inventor's signature  Date 6/26/01

Residence Danville, California

Citizenship U.K.

Post Office Address 2405 Saddleback Drive, Danville, CA 94506

Full name of second inventor Mark Selby

Inventor's signature  Date 6/15/01

Residence San Francisco, California

Citizenship U.S.A.

Post Office Address 136 Galewood Circle, San Francisco, CA 94131

Full name of sole or third inventor Sergio Abrignani

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence Vagliagli, Italy

Citizenship Italy

Post Office Address Piazza Fabbrini 5, Vagliagli, Italy

Full name of fourth inventor Jens Martin Heile

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence Ludwigsburg, Germany

Citizenship German

Post Office Address Keltenstrasse 5, 71640 Ludwigsburg, Germany

Full name of sole or fifth inventor Derek O'Hagan

Inventor's signature  Date 6.21.01

Residence Berkeley, California

Citizenship U.K.

Post Office Address 2373 Woolsey Street, Berkeley, CA 94008



**DECLARATION FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **ELICITING HCV-SPECIFIC ANTIBODIES**

the specification of which (check one)    is attached hereto   X   was filed on December 1, 2000 as Application Serial No. 09/728,423, and was amended on    (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
Number	Country	Day/Month/Year Filed	<u>Yes</u>	<u>No</u>

I hereby claim the benefit under Title 35, United States Code, §120 and/or §119(e) of any United States application(s) and/or provisional applications listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application Serial No.	Filing Date	Status
		<u>Patented, Pending, Abandoned</u>
60/168,234	1 December 1999	Abandoned
60/185,055	25 February 2000	Abandoned

I hereby declare that all statements herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Michael Houghton

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence Danville, California

Citizenship U.K.

Post Office Address 2405 Saddleback Drive, Danville, CA 94506

Full name of second inventor Mark Selby

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence San Francisco, California

Citizenship U.S.A.

Post Office Address 136 Galewood Circle, San Francisco, CA 94131

Full name of sole or third inventor Sergio Abrignani

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence Vagliagli, Italy

Citizenship Italy

Post Office Address Piazza Fabbri 5, Vagliagli, Italy

Full name of fourth inventor Jens Martin Heile

Inventor's signature Jens-Martin Heile Date 06/25/01

Residence Ludwigsburg, Germany

Citizenship German

Post Office Address Keltenstrasse 5, 71640 Ludwigsburg, Germany

Full name of sole or fifth inventor Derek O'Hagan

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence Berkeley, California

Citizenship U.K.

Post Office Address 2373 Woolsey Street, Berkeley, CA 94008



**DECLARATION FOR PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled: **ELICITING HCV-SPECIFIC ANTIBODIES**

the specification of which (check one) \_\_\_ is attached hereto X was filed on December 1, 2000 as Application Serial No. 09/728,423, and was amended on \_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, Section 1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

Prior Foreign Application(s)			Priority Claimed	
Number	Country	Day/Month/Year Filed	<u>Yes</u>	<u>No</u>

I hereby claim the benefit under Title 35, United States Code, §120 and/or §119(e) of any United States application(s) and/or provisional applications listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Application <u>Serial No.</u>	<u>Filing Date</u>	Status <u>Patented, Pending, Abandoned</u>
60/168,234	1 December 1999	Abandoned
60/185,055	25 February 2000	Abandoned

I hereby declare that all statements herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Full name of sole or first inventor Michael Houghton

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence Danville, California

Citizenship U.K.

Post Office Address 2405 Saddleback Drive, Danville, CA 94506

Full name of second inventor Mark Selby

Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence San Francisco, California

Citizenship U.S.A.

Post Office Address 136 Galewood Circle, San Francisco, CA 94131

Full name of sole or third inventor Sergio Abrignani

Inventor's signature  Date 6/12/01

Residence Vagliagli, Italy

Citizenship Italy

Post Office Address Piazza Fabbrini 5, Vagliagli, Italy

Full name of fourth inventor Jens Martin Heile

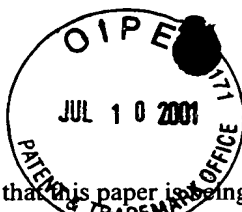
Inventor's signature \_\_\_\_\_ Date \_\_\_\_\_

Residence Ludwigsburg, Germany

Citizenship German

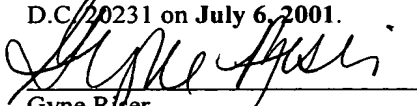
Post Office Address Keltenstrasse 5, 71640 Ludwigsburg, Germany

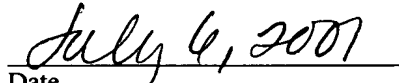




PATENT  
Atty Dkt. No. 1618.003

I hereby certify that this paper is being deposited in the United States Postal Service as first class mail in an envelope addressed: BOYD HESSING PARTS, Assistant Commissioner of Patent and Trademarks, Washington, D.C. 20231 on July 6, 2001.

  
Gyne Riser

  
Date

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

MICHAEL HOUGHTON et al.

Serial No.: 09/728,423

Group Art: Unassigned

Filed: December 1, 2000

Examiner: Unassigned

For: ELICITING HCV-SPECIFIC ANTIBODIES

**POWER OF ATTORNEY**

Assistant Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. §1.36, Chiron Corporation, the Assignee of the above-identified patent application hereby appoints the following attorneys and agents to prosecute this application and to transact all business in the Patent and Trademark Office in connection therewith.

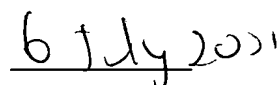
Lisa A. Alexander – Reg. No. 41,576  
Robert P. Blackburn - Reg. No. 30,447  
Anne S. Dollard – Reg. No. 43,935  
Joseph H. Guth - Reg. No. 31,261  
Alisa A. Harbin - Reg. No. 33,895  
Charlene A. Launer - Reg. No. 33,035

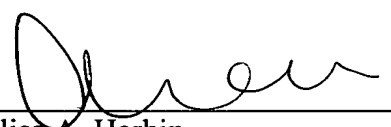
David P. Lentini - Reg. No. 33,944  
Kimberlin L. Morley - Reg. No. 35,391  
Roberta L. Robins - Reg. No. 33,208  
Gary R. Fabian - Reg. No. 33,875  
Dahna Pasternak – Reg. No. 41,411  
Cathleen M. Rocco, Reg. No. 46,172

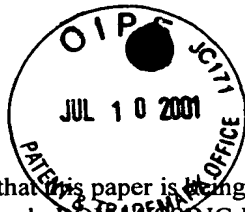
Please direct all correspondence and telephone calls regarding this application to the following:

Chiron Corporation  
Intellectual Property - R440  
P.O. Box 8097  
Emeryville, CA 94662-8097  
(510) 923-2708

CHIRON CORPORATION

Dated: 

By:   
Alisa A. Harbin  
Assistant Secretary



PATENT  
Atty. Dkt. No. 1618.003

I hereby certify that this paper is being deposited in the United States Postal Service as first class mail in an envelope addressed: BOB PRESSING PARTS, Assistant Commissioner of Patent and Trademarks, Washington, D.C. 20231 on July 6, 2001.

Gyne Riser  
Gyne Riser

July 6, 2001  
Date

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

MICHAEL HOUGHTON et al.

Serial No.: 09/728,423

Group Art: Unassigned

Filed: December 1, 2000

Examiner: Unassigned

For: ELICITING HCV-SPECIFIC ANTIBODIES

**CERTIFICATE UNDER 37 C.F.R. § 3.73(b)**

CHIRON CORPORATION

(Name of Assignee)

, a

Corporation

(Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☐ the assignee of the entire right, title, and interest, or
2. ☒ an assignee of an undivided part interest

in the patent application/patent identified above by virtue of either:

- A. ☐ An Assignment from the inventor(s) of the patent application/patent identified above.  
The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_,  
Frame \_\_\_\_\_, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s) of the patent application/patent identified above  
to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

2. From: \_\_\_\_\_ To: \_\_\_\_\_

The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the Patent and Trademark Office at  
Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

[ ] Additional documents in the chain of title are listed on a supplemental sheet.

[ X] Copies of assignments or other documents in the chain of title are attached.

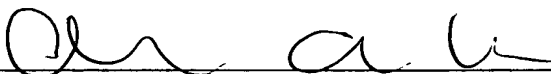
**[NOTE:** A separate copy (*i.e.*, the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the PTO. See MPEP 302-302.8]

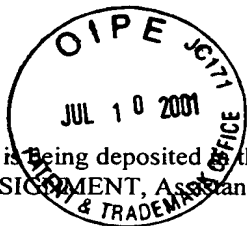
The undersigned (whose title is supplied below) is empowered to act on behalf of the assignee.

Date: 6 July 2001

Name: Alisa A. Harbin

Title: Assistant Secretary, CHIRON CORPORATION

Signature: 



PATENT  
Atty. Dkt. 1618.003

I hereby certify that this paper is being deposited in the United States Postal Service as first class mail in an envelope addressed: BOX ASSIGNMENT, Assistant Commissioner of Patent and Trademarks, Washington, D.C. 20231 on July 6, 2001.

Gyne Riser  
Gyne Riser

July 6, 2001  
Date

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of:

**MICHAEL HOUGHTON et al.**

Serial No.: 09/728,423

Group Art: Unassigned

Filed : December 1, 2000

Examiner: Unassigned

For : ELICITING HCV-SPECIFIC ANTIBODIES

**ASSIGNMENT DOCUMENT COVER LETTER**

Box Assignment

Assistant Commissioner of Patents and Trademarks

Washington, D.C. 20231

1. The accompanying assignment covers the patent or application identified above.

X No other patents or applications are covered by the assignment.

— Other patents and/or applications are covered by the assignment as shown on the attached LIST OF PATENTS AND/OR APPLICATIONS COVERED BY ASSIGNMENT.

**NAMES OF PARTY MAKING TRANSFER**

2. Name 1: Derek O'Hagan

**IDENTITY OF PARTY TO WHOM TRANSFER IS MADE**

3. Transfer is being made to:

Chiron Corporation  
4560 Horton Street  
Emeryville, CA 94608-2916

**INTENTION OF DOCUMENT**

4. The accompanying document is an:

X Assignment                      — License  
— Security Interest              — Other

X Execution Date: 06/21/01

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

**FEE PAYMENT**

5. Total fee due \$40.00
6.      Charge Deposit Account No. 03-1664 in the sum of \$40.00.
- X   Enclosed is a check for \$40.00.
- X   The Commissioner is hereby authorized to charge any additional fees which may be required or credit any overpayment to Deposit Account No. 03-1664. THIS IS NOT AN AUTHORIZATION FOR PAYMENT OF ANY ISSUE FEES.

**ADDRESS TO WHICH DOCUMENT SHOULD BE RETURNED AFTER  
RECORDAL BY PTO**

7. Please return the recorded document to:

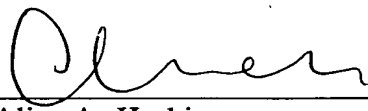
CHIRON CORPORATION  
Intellectual Property - R440  
P.O. Box 8097  
Emeryville, California 94662-8097  
United States of America

**STATEMENT BY THE PARTY**

8. I hereby submit that, to the best of my knowledge and belief, the foregoing information contained herein is true and correct and any copy submitted herewith is a true and correct copy of the original document.

Respectfully submitted,

Dated: 6 July 2021

By:   
Alisa A. Harbin  
Attorney for Assignee  
Reg. No. 33,895

CHIRON CORPORATION  
Intellectual Property - R440  
P.O. Box 8097  
Emeryville, California 94662-8097  
(510) 923-2708  
(510) 655-3542 (Fax)

Total number of pages comprising cover sheet:   5   (Cover Letter plus Original Assignment)

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

**ASSIGNMENT**

**WHEREAS, WE, MICHAEL HOUGHTON, MARK SELBY, SERGIO ABRIGNANI, JENS HEILE AND DEREK O'HAGAN**

hereinafter referred to as **ASSIGNORS**, have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: ELICITING HCV-SPECIFIC ANTIBODIES

Date of Execution:

Filing Date: December 1, 2000

Serial No: 09/728,423

**WHEREAS, CHIRON CORPORATION**, 4560 Horton Street, Emeryville, California 94608-2916, a corporation of the State of Delaware, hereinafter referred to as **ASSIGNEE**, is desirous of acquiring the entire right, title and interest in the above invention and application and in any Letters Patent which may be granted on the same;

**NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:** Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to **ASSIGNORS** by **ASSIGNEE**, receipt of which is hereby acknowledged, **ASSIGNORS** have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said **ASSIGNEE**, and **ASSIGNEE'S** successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions (including conversions claiming priority under 35 U.S.C. §119(e)), reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said **ASSIGNEE** as fully and exclusively as it would have been held and enjoyed by said **ASSIGNORS** had this assignment and transfer not been made, to the full end and term of any Letters Patent.

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

*ASSIGNORS* further agree that they will, without charge to said *ASSIGNEE*, but at *ASSIGNEE'S* expense, cooperate with *ASSIGNEE* in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as *ASSIGNEE* lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said *ASSIGNEE*, or *ASSIGNEE'S* successors and assigns.

*IN TESTIMONY WHEREOF, ASSIGNORS* have hereunto signed their name to this assignment on the dates indicated below.

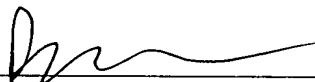
DATE \_\_\_\_\_

\_\_\_\_\_  
Michael Houghton

DATE \_\_\_\_\_

\_\_\_\_\_  
Mark Selby

DATE 6.21.01

  
\_\_\_\_\_  
Derek O'Hagan

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH



## CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Alameda

} ss.

On 06/21/01

Date

, before me, Gyne Riser

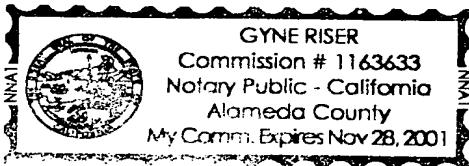
Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared --Derek O'Hagan--

Name(s) of Signer(s)

☒ personally known to me

☐ proved to me on the basis of satisfactory evidence



to be the person(s) whose name(s) is/~~are~~  
subscribed to the within instrument and  
acknowledged to me that he/~~she~~/they executed  
the same in his/~~her~~/their authorized  
capacity(ies), and that by his/~~her~~/their  
signature(s) on the instrument the person(s), or  
the entity upon behalf of which the person(s)  
acted, executed the instrument.

WITNESS my hand and official seal.

Gyne Riser  
Signature of Notary Public

Place Notary Seal Above

### OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

#### Description of Attached Document

Title or Type of Document: Assignment 1618.003

Document Date: June 21, 2001

Number of Pages: -Two-

Signer(s) Other Than Named Above: None

#### Capacity(ies) Claimed by Signer

Signer's Name: \_\_\_\_\_

☒ Individual

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

Top of thumb here

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH



**ASSIGNMENT**

**WHEREAS, WE, MICHAEL HOUGHTON, SHIRLEY WONG, KIM BERGER, MARK SELBY, SERGIO ABRIGNANI, DOMENICO ROSA AND JENS HEILE**

hereinafter referred to as **ASSIGNORS**, have invented certain new and useful improvements as described and set forth in the below-identified application for United States Letters Patent:

Title of Invention: ACTIVATION OF HCV-SPECIFIC CELLS

Date of Execution:

Filing Date: February 25, 2000

Serial No: 60/185,055

WHEREAS, CHIRON CORPORATION, 4560 Horton Street, Emeryville, California 94608-2916, a corporation of the State of Delaware, hereinafter referred to as **ASSIGNEE**, is desirous of acquiring the entire right, title and interest in the above invention and application and in any Letters Patent which may be granted on the same;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to **ASSIGNORS** by **ASSIGNEE**, receipt of which is hereby acknowledged, **ASSIGNORS** have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said **ASSIGNEE**, and **ASSIGNEE'S** successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions (including conversions claiming priority under 35 U.S.C. §119(e)), reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said **ASSIGNEE** as fully and exclusively as it would have been held and enjoyed by said **ASSIGNORS** had this assignment and transfer not been made, to the full end and term of any Letters Patent.

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

*ASSIGNORS* further agree that they will, without charge to said *ASSIGNEE*, but at *ASSIGNEE'S* expense, cooperate with *ASSIGNEE* in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as *ASSIGNEE* lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said *ASSIGNEE*, or *ASSIGNEE'S* successors and assigns.

IN TESTIMONY WHEREOF, *ASSIGNORS* have hereunto signed their name to this assignment on the dates indicated below.

DATE 10/19/00

M Houghton  
Michael Houghton

DATE 10/19/00

Shirley Wong  
Shirley Wong

DATE 6/13/01

Kim Berger  
Kim Berger

DATE 10/19/00

Mark Selby  
Mark Selby  
ms

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Alameda

SS.

On 10/19/00

Date

, before me, --Gyne Riser--

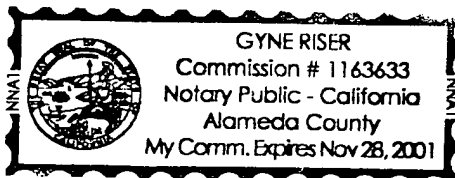
Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared --Michael Houghton, Shirley Wong and Mark Selby--

Name(s) of Signer(s)

☒ personally known to me

☐ proved to me on the basis of satisfactory evidence



to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

*Gyne Riser*  
Signature of Notary Public

Place Notary Seal Above

## OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

### Description of Attached Document

Title or Type of Document: Assignment 1618.002

Document Date: 10/10/99 10/19/00

Number of Pages: 2

Signer(s) Other Than Named Above: --Kim Berger--

### Capacity(ies) Claimed by Signer

Signer's Name: \_\_\_\_\_

☐ Individual

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

Top of thumb here

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Alameda

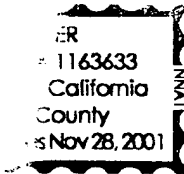
} ss.

On June 13, 2001, before me, Gyne Riser  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared --Kim Berger--  
Name(s) of Signer(s)

- ☒ personally known to me  
☐ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/~~are~~  
subscribed to the within instrument and  
acknowledged to me that ~~he/she/they~~ executed  
the same in ~~his/her/their~~ authorized  
capacity(ies), and that by ~~his/her/their~~  
signature(s) on the instrument the person(s), or  
the entity upon behalf of which the person(s)  
acted, executed the instrument.



WITNESS my hand and official seal.

Gyne Riser  
Signature of Notary Public

Place Notary Seal Above

## OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

### Description of Attached Document

Title or Type of Document: Assignment 1618.002

Document Date: October 19, 2001 Number of Pages: -Two-

Signer(s) Other Than Named Above: Michael Houghton, Shirley Wong and Mark Selby

### Capacity(ies) Claimed by Signer

- Signer's Name: \_\_\_\_\_
- ☒ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — ☐ Limited ☐ General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

RIGHT THUMBPRINT  
OF SIGNER

Top of thumb here



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

JUNE 12, 2000

PTAS

CHIRON CORPORATION  
4560 HORTON STREET  
EMERYVILLE, CALIFORNIA 94608-2916  
UNITED STATES OF AMERICA



\*101321343A\*



UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 03/20/2000

REEL/FRAME: 010688/0107  
NUMBER OF PAGES: 14

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

HOUGHTON, MICHAEL

DOC DATE: 03/09/2000

ASSIGNOR:

WONG, SHIRLEY

DOC DATE: 03/10/2000

ASSIGNOR:

BERGER, KIM

DOC DATE: 02/29/2000

ASSIGNOR:

SELBY, MARK

DOC DATE: 03/09/2000

ASSIGNOR:

ABRIGNANI, SERGIO

DOC DATE: 02/18/2000

ASSIGNOR:

ROSA, DOMENICO

DOC DATE: 02/21/2000

ASSIGNOR:

HEILE, JENS

DOC DATE: 02/27/2000

*6/23/00*  
*1618.001*

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

010688/0107 PAGE 2

ASSIGNEE:

CHIRON CORPORATION  
INTELLECTUAL PROPERTY-R440  
EMERYVILLE, CALIFORNIA 94608-2916

SERIAL NUMBER: 60168234  
PATENT NUMBER:

FILING DATE: 12/01/1999  
ISSUE DATE:

MAURICE CARTER, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231,

on this 15<sup>th</sup> day of March, 2000.

By Amanda D. Wilcox

04-17-2000



101321343

Atty. Docket No. 1618.001

JUL 10 2001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

MICHAEL HOUGHTON et al.

Serial No.: 60/168,234

Group Art: Unassigned

Filed : December 1, 1999

Examiner: Unassigned

For : ELICITING HCV-SPECIFIC ANTIBODIES

ASSIGNMENT DOCUMENT COVER LETTER

Box Assignment  
Assistant Commissioner of Patents and Trademarks  
Washington, D.C. 20231

1. The accompanying assignment covers the patent or application identified above.

X No other patents or applications are covered by the assignment.

— Other patents and/or applications are covered by the assignment as shown on the attached LIST OF PATENTS AND/OR APPLICATIONS COVERED BY ASSIGNMENT.

**NAMES OF PARTY MAKING TRANSFER**

2. Name: Michael Houghton  
Shirley Wong  
Kim Berger  
Mark Selby  
Sergio Abrignani  
Domenico Rosa  
Jens Heile

**IDENTITY OF PARTY TO WHOM TRANSFER IS MADE**

3. Transfer is being made to:

2000 TTOM11 00000339 60168234

:581

40.00 OP

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH



Atty. Docket No. 12441.82670  
Atty. Docket No. 1618.001

CHIRON CORPORATION  
4560 Horton Street  
Emeryville, California 94608-2916  
United States of America

#### INTENTION OF DOCUMENT

4. The accompanying document is an:

☒ Assignment ☐ License  
☐ Security Interest ☐ Other

☒ Execution Date: 02/18/00, 02/21/00, 02/27/00, 02/29/00, 03/09/00 and  
03/10/00

#### FEE PAYMENT

5. Total fee due \$40.00

6. ☐ Charge Deposit Account No. 03-1664 in the sum of \$40.00.

☒ Enclosed is a check for \$40.00.

☒ The Commissioner is hereby authorized to charge any additional fees which  
may be required or credit any overpayment to Deposit Account No. 03-1664.  
THIS IS NOT AN AUTHORIZATION FOR PAYMENT OF ANY ISSUE  
FEES.

#### ADDRESS TO WHICH DOCUMENT SHOULD BE RETURNED AFTER RECORDAL BY PTO

7. Please return the recorded document to:

CHIRON CORPORATION  
Intellectual Property - R440  
P.O. Box 8097  
Emeryville, California 94662-8097  
United States of America

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH





Atty. Docket No. 12441.82670  
Atty. Docket No. 1618.001

### STATEMENT BY THE PARTY

8. I hereby submit that, to the best of my knowledge and belief, the foregoing information contained herein is true and correct and any copy submitted herewith is a true and correct copy of the original document.

Respectfully submitted,

By:   
Alisa A. Harbin  
Reg. No. 33,895

March 15, 2000

CHIRON CORPORATION  
Intellectual Property - R440  
P.O. Box 8097  
Emeryville, California 94662-8097  
(510) 923-2719  
(510) 655-3542 (Fax)

Total number of pages comprising cover sheet: 14 (Cover Letter plus Original Assignment)

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

**ASSIGNMENT**

*WHEREAS, We, Michael Houghton, Shirley Wong, Kim Berger, Mark Selby, Sergio Abrignani, Domenico Rosa and Jens Heile*, hereinafter referred to as **ASSIGNORS**, have co-invented certain improvements as described and set forth in the below-identified application for International Application:

Title of Invention:       ELICITING HCV-SPECIFIC ANTIBODIES  
Date of Execution:       February 18, 21, 27, 29, 2000 and March 09 and 10, 2000  
Filing Date:             01 December 1999  
Serial No:                60/168,234

*WHEREAS, CHIRON CORPORATION*, located at 4560 Horton Street, Emeryville, California 94608-2916, a corporation of the State of Delaware, hereinafter referred to as **ASSIGNEE**, is desirous of acquiring the entire right, title and interest in the said invention and application and in any Letters Patent which may be granted on the same;

*NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:* Be it known that, for and in consideration of the sum of One Dollar (\$1.00) lawful money paid to **ASSIGNORS** by **ASSIGNEE**, receipt of which is hereby acknowledged, **ASSIGNORS** have sold, assigned and transferred, and by these presents do sell, assign and transfer unto said **ASSIGNEE**, and **ASSIGNEE'S** successors and assigns, all right, title and interest in and to the said invention, said application for United States Letters Patent, and any Letters Patent which may hereafter be granted on the same in the United States and all countries throughout the world including any divisions, renewals, continuations in whole or in part, substitutions, conversions (including conversions claiming priority under 35 U.S.C. § 119(e)), reissues, prolongations or extensions thereof, the said interest to be held and enjoyed by said **ASSIGNEE** as fully and exclusively as it would have been held and enjoyed by said **ASSIGNORS** had this assignment and transfer not been made, to the full end and term of any Letters Patent.

**ASSIGNORS** also agree that the U.S. serial number and the filing date may be entered above by **ASSIGNEE** or its agents upon designation of the serial number and the filing date by the U.S. Patent and Trademark Office.

**ASSIGNORS** further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

*IN TESTIMONY WHEREOF*, **ASSIGNORS** have hereunto signed their names to this assignment on the dates indicated below.

Date: 3/9/00  
Inventor: M Houghton

Michael Houghton

PATENT

60/168,234

Attorney Docket No. 1618.001

**ASSIGNORS** further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

*IN TESTIMONY WHEREOF*, **ASSIGNORS** have hereunto signed their names to this assignment on the dates indicated below.

Date: March 10, 2000

Inventor: Shirley Wong  
Shirley Wong

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

Alameda

} ss.

On March 10, 2000, before me,

Date

Amanda Denise Wilcox

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared

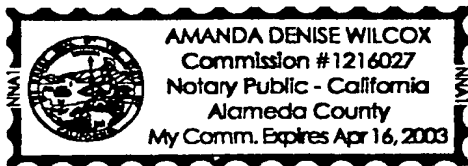
Shirley Wong

Name(s) of Signer(s)

☐ personally known to me

☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal Above

WITNESS my hand and official seal.

Amanda Denise Wilcox

Signature of Notary Public

## OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

### Description of Attached Document

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_

Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

### Capacity(ies) Claimed by Signer

Signer's Name: \_\_\_\_\_

☐ Individual

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

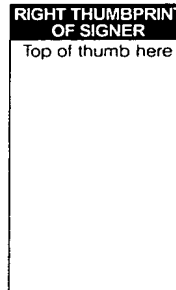
☐ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_



COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

PATENT

60/168,234

Attorney Docket No. 1618.001

**ASSIGNORS** further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

*IN TESTIMONY WHEREOF*, **ASSIGNORS** have hereunto signed their names to this assignment on the dates indicated below.

Date: 2/29/00

Inventor: Kim Berger  
Kim Berger

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

Alameda

} ss.

On Feb. 29, 2000, before me, Amanda Denise Wilcox,  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

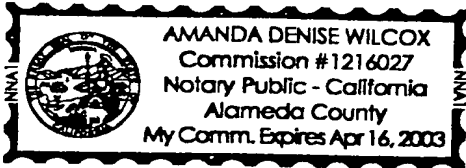
personally appeared

Kim Berger

Name(s) of Signer(s)

- ☐ personally known to me  
☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal Above

WITNESS my hand and official seal.

Amanda Denise Wilcox  
Signature of Notary Public

## OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

### Description of Attached Document

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

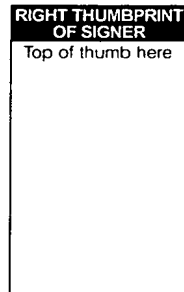
Signer(s) Other Than Named Above: \_\_\_\_\_

### Capacity(ies) Claimed by Signer

Signer's Name: \_\_\_\_\_

- ☐ Individual  
☐ Corporate Officer — Title(s): \_\_\_\_\_  
☐ Partner — ☐ Limited ☐ General  
☐ Attorney in Fact  
☐ Trustee  
☐ Guardian or Conservator  
☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_



COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

PATENT

60/168,234

Attorney Docket No. 1618.001

**ASSIGNORS** further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

*IN TESTIMONY WHEREOF*, **ASSIGNORS** have hereunto signed their names to this assignment on the dates indicated below.

Date: 3/9/00  
—

Inventor: Mark Selby

Mark Selby



# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of

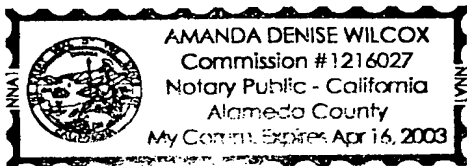
Alameda } ss.

On March 9, 2000 before me, Amanda Denise Wilcox  
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Michael Houghton & Mark Selby  
Name(s) of Signer(s)

☐ personally known to me  
☒ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) ~~is~~are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in ~~his/her~~their authorized capacity(ies), and that by ~~his/her~~their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal Above

WITNESS my hand and official seal.

Amanda Denise Wilcox  
Signature of Notary Public

## OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

### Description of Attached Document

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

### Capacity(ies) Claimed by Signer

Signer's Name: \_\_\_\_\_

- ☐ Individual
- ☐ Corporate Officer — Title(s): \_\_\_\_\_
- ☐ Partner — ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

<b>RIGHT THUMBPRINT OF SIGNER</b> Top of thumb here
------------------------------------------------------------

COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

**ASSIGNORS** further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

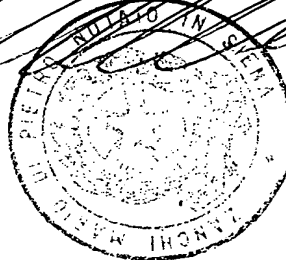
IN TESTIMONY WHEREOF, **ASSIGNORS** have hereunto signed their names to this assignment on the dates indicated below.

Date: February 18, 2000

Inventor: \_\_\_\_\_

Sergio Abrignani

Abrignani Dottor Sergio nato a Marsala il 3 giugno 1958, ricercatore residente in Castelnuovo Berardenga, località Vagliagli, Piazza Fabbrini n. 5



COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

**ASSIGNORS** further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE**

lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

IN TESTIMONY WHEREOF, **ASSIGNORS** have hereunto signed their names to this assignment on the dates indicated below.

Date: February 21, 2002

Inventor: Domenico Rosa

Domenico Rosa

Rosa Domenico nato a Napoli il 20 agosto 1959, residente in Castelnuovo Berardenga Via della Pace n. 20, medico



COPY ONLY  
DO NOT FORWARD  
TO  
ASSIGNMENT BRANCH

**ASSIGNORS** further agree that they will, without charge to said **ASSIGNEE**, but at **ASSIGNEE'S** expense, cooperate with **ASSIGNEE** in the prosecution of said application and/or applications, execute, verify, acknowledge and deliver all such further papers, including applications for Letters Patent and for the reissue thereof, and instruments of assignment and transfer thereof, and will perform such other acts as **ASSIGNEE** lawfully may request, to obtain or maintain Letters Patent for said invention and improvement in any and all countries, and to vest title thereto in said **ASSIGNEE**, or **ASSIGNEE'S** successors and assigns.

IN TESTIMONY WHEREOF, **ASSIGNORS** have hereunto signed their names to this assignment on the dates indicated below.

Date: February 21, 2000  
—

Inventor:   
Jens Heile   
MARTIN

Jens Martin Heile nato a Ludwigsburg (Germania) il 27 febbraio 1968 ivi residente Stadtkteil ossweil taltenstrasse 5, ricercatore biologo

